



DI 150

Dual Mono Integrated Amplifier

User guide

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Content of the DI 150 box

- One GamuT DI 150 integrated amplifier
- One mains cord with plug for either 115VAC or 230VAC
- One GamuT RC1 amplifier/CD-player remote control unit
- Two AAA batteries

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Safety instructions

Warning:

- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
- No user serviceable parts inside. Refer servicing to a qualified technician. Never remove the cover unless qualified to do so. This unit contains dangerous voltages.

Never:

- Let children (or grownups) push anything into holes or slots in the case - this could result in harmful electrical shock and could cause damage of the equipment.
- Guess or take chances with electrical equipment of any kind - it is always better to be safe than sorry.
- Obstruct the necessary all-around ventilation: especially DO NOT place the set close to curtains or on soft furnishing such as carpets. Overheating can cause unnecessary damage and shorten the lifespan of the equipment.

Always:

- Read the user manual and familiarize yourself with the functions before you attempt to use this equipment.
- Ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly inserted and set in accordance with the manufacturer's instructions.
- Check that the GamuT DI 150 mains fuse rating is set correctly for your local mains voltage. Please see backside label at mains inlet.

About the GamuT DI 150

The DI 150 arises from the wish to melt two high-end audio components into one while compromising neither the quality of design nor the electrical circuits.

Our overall goal was to create the best sounding integrated amplifier available.

Design considerations

The cabinet is a rigid construction with use of massive and genuine high grade materials, such as aluminium and stainless steel. This does not only contribute to the touch and feel factor, but is essential for a long-lasting life even in a tough environment.

A GamuT product is built to be used daily and we expect our products to be in the “field” for many years to come.

Under normal circumstances the DI150 should not need inspection or service for quite a while. The capacitors, for instance, have a promised lifespan of 10 years without degrading.

Electrical circuitry considerations

All components used in the DI 150 are of the highest quality and have been selected through intensive listing sessions from the PCB itself over the non-magnetic chassis to the WBT output terminals.

The DI 150 is based on following GamuT specialties:

- Dual-FET hybrid input buffer
- Single power MOS-FET output circuit
- Extremely powerful power supply with high bandwidth and low impedance
- A unique protection circuit that ensures both the amplifier and the loudspeakers will survive severe faults that normally would lead to critical damage to either or both units

Unpacking

Carefully cut open the box with a knife. Remove the cables from the carton and lift up the DI 150 from inside the box. Remove the protective plastic enclosing the amplifier. Please be careful not to place the amplifier on the front panel or bend the various terminals on the backside when doing so.

Please keep the packaging material in a safe place as it might come in handy later.

Placement

The DI 150 will get hot during use. It is important that it has free space all around the amplifier, especially sides and the top.

Connecting to mains

Your DI 150 has been especially made for the country to which it has been shipped. Any attempt to change the voltage or other types of modifications should be considered unsafe and may cause damage to both the amplifier and any connected equipment. Warranty is annulled by any form of modification performed by any person not authorized by GamuT.

Connect the DI 150 to the mains supply with the supplied IEC mains cable.

For further improvements to the level of sound quality, various types of mains cable type may be tested. Like the importance of any other cable in the system, the quality and refinement of the mains cable has influence on the total balance of the sound. Please feel free to experiment with the various brands available in your country. Please note that GamuT cannot accept responsibility for damage incurred due to improper usage, connection, or manufacture of other cables than the enclosed.

The mains switch is located underneath the amplifier's front right corner. When the amplifier is switched on, the display will light up and you will hear two small clicks from inside the amplifier.

Connecting to other equipment

The GamuT DI 150 features six signal level inputs and three available outputs;

Inputs

Four unbalanced inputs:

- CD
- Tuner
- Tape
- HTH (bypass option)

Two Balanced inputs:

- Bal 1
- Bal 2

Please note that all connectors of the DI 150 are gold plated. This is done to ensure long lasting and stable connections. Do only use cable and connectors either gold or silver plated.

All of the inputs are line level inputs. If a turntable is to be connected, a separate RIAA amplifier must be used in between the turntable and the DI 150. You can use any of the inputs you like.

The HTH input also features a “direct” function. Please refer to the section “how to operate”

The DI 150 also features two set of balanced inputs. We follow the international IEC standard for the balanced connections; please ensure that the connected equipment complies with the following:

Pin connection of the XLR.

1. Ground
2. Positive
3. Negative

Some other brands have Pin 2 and 3 reversed. They will work, but the absolute phase will be reversed. You can solve this by reversing the wires in the male plug of your balanced interconnects.

The two balanced input can be used for any balanced signal source such as a CD player or a separate D/A converter. You can also use them with a pair of RCA female/XLR male adapters for further connection of unbalanced sources.

Outputs

What comes in must come out!

The DI150 offers you plenty of option when connecting:

- One pair of unbalanced signal line out
- One pair of balanced signal line out
- One Tape out
- On pair of speaker out

The unbalance and the balanced line out, enable you to connect the DI150 to an external power amplifier to either bi-amp or drive a second set of loudspeakers. You can also use the line out to feed an active subwoofer. In any case; the signal of the output follows the selected level and source.

The Tape out tended to be used for an analogue recording device. It has a fixed level that follow the actual input level with unity gain.

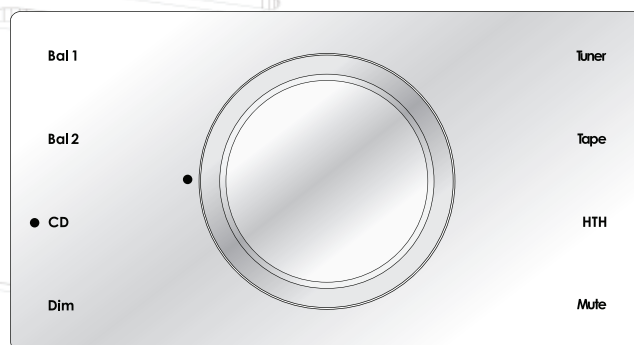
It also has its own buffer amplifier, so that the recording device load does not disturb the main signal path.

How to operate

Selecting a source

Select the desired source by pushing the button beside the name of the connected source. A blue dot will light between the text and the button to indicate the selected source. In example to the right the CD input is selected.

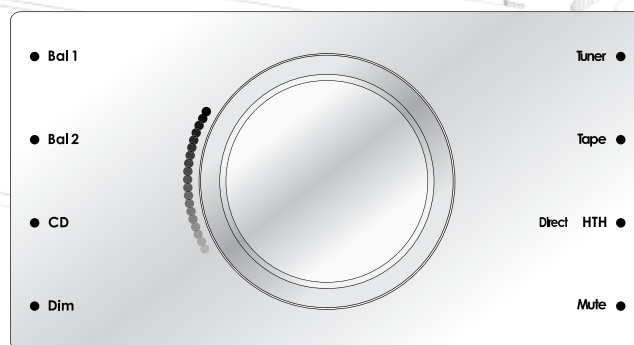
The input selection can be toggled with the remote control, please refer to the section "Remote control"



Adjusting the listening level

In the middle of the DI 150 front panel you will find the large volume control knob. On the outside parameter of the knob a small blue dot lights up to indicate the level setting. Turn the knob by hand to the desired level. The scale goes from approx 8 o'clock minimum level to approx. 4 o'clock as maximum output level.

The output level can also be adjusted by the remote control, please refer to the section "remote control"



Please note: We have selected an expensive ALPS dual logarithmic potentiometer for setting the listening level. To reduce noise, we have chosen a 1kOhm version. Such a potentiometer cannot make the sound disappear completely, even when you turn it down to the lowest setting. If complete silence is required, enable the Mute function described below.

Mute function

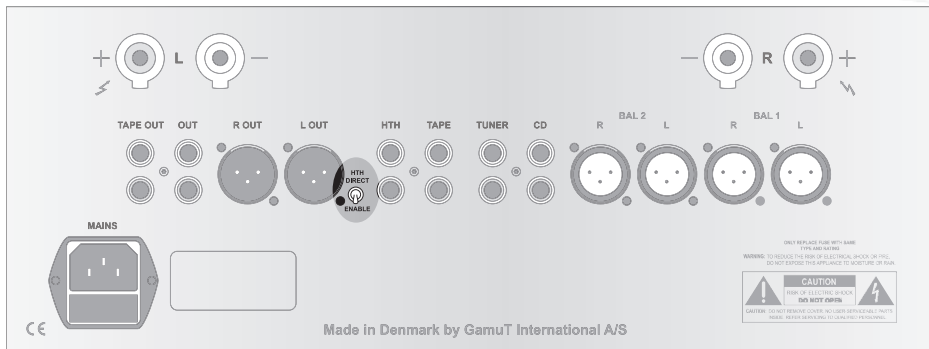
The DI 150 features a mute function that will efficiently mute the selected signal. Push the "mute" button to activate the Mute function. The blue dot indicating the selected source is now replaced by a dot indicating the mute function is enabled as shown below.

Push the Mute button again to disable the mute function and return to the previously selected source and level. For your comfort and the safety of your equipment, please ensure beforehand that the volume knob has not accidentally been adjusted further towards the maximum output setting before you disable the mute button.



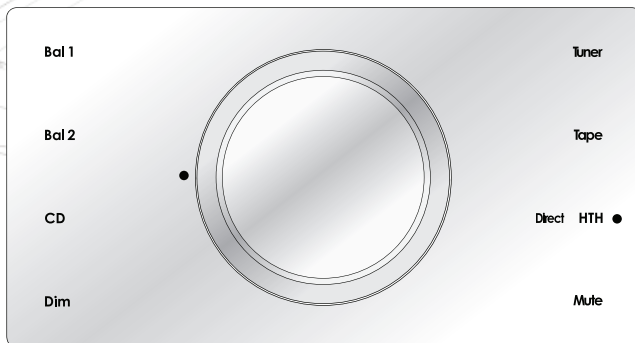
The Mute function can also be enabled and disabled by the remote control, please refer to the section "remote control".

HTH Direct



This function is intended for cases where the DI 150 is connected to a surround preamplifier or processor. Enable the “direct” function by pushing the small switch situated at the left side of the HTH input terminals on the backside of the amplifier.

Small characters at the HTH display now indicate “direct”.



The “direct” function of this input will bypass the volume control and lead the signal directly the output stage of the DI 150. This converts the DI 150 into a power amplifier, driving your front left and right loudspeakers in a surround setup.

While the HTH “direct” is enabled and the HTH input is selected, the remote controlled volume will be disabled to avoid conflict with other remote control systems.















Recording from an input source

You can always record from the actual source selected using the **Tape Out**. Please note that the output level will match the input level due to the internal buffer in GamuT DI 150.






The remote control

Overview



CD player functions:

-  Open/close
-  A-B A-B repeat
-  REP Repeat one/all
-  PGM Program (CD 1 only)
-  DIM Display dim
-  REM Remain (CD 1 only)
-  1 Direct track selection 1-10 / 10+
-  Play
-  Pause
-  Stop
-  Next track
-  Previous track
-  Fast forward
-  Fast backwards

Amplifier functions:

-  + Volume up
-  - Volume Down
-  Next source toggle
-  Previous source toggle
-  Mute

Buttons present, but not in use:

-  Standby
-  PHS Phase



Functions



Volume up

By pushing this button the volume control knob will turn and the blue level indicator dot will rotate clockwise. Holding the button down will eventually make the knob turn all around to maximum level.



Volume Down

This button will do the exact opposite of the volume up button. Push the button down, until a pleasant level is reached.



Next source toggle

By pressing the arrow up button the next input source will be selected according to the following order:

- Bal 1 - Bal 2 - CD - Tuner - Tape - HTH -

When it reaches the last source HTH, it will start over again by selecting the Bal 1 input.



Source toggle previous

The arrow down button will switch the previous input source as follows:

- HTH - Tape - Tuner - CD - Bal 2 - Bal 1 -

When reaching the first source Bal 1, it will then start over again by selecting the HTH input.



Mute

To enable Mute, push the mute button once. Push it again and the function is now disabled.

Burn-in and warm up

Burn-in

All new electronics must be burned in to achieve its optimum performance. Please allow the new amplifier to burn in by playing music with the loudspeakers connected for one hundred hours before critical listening is performed.

Warm up

Please allow the amplifier and other audio equipment to warm up prior to serious listening. Expect at least one hour of warming before optimum performance can be achieved.

Maintenance

To ensure long-lasting durability and to prevent magnetic influence on the electronics, the cabinet is made from stainless steel and aluminum.

For cleaning the cabinet, use a dry cloth and wipe dust away. If needed, moisturize the cloth with a small amount of window cleaning dissolvent.

Be very careful not to scratch the mirror display at the front.

Do not use any other type of cleaning material or polish, as you may destroy the cabinet's protective coating.

Service

The simplicity of the GamuT DI 150 means that very few parts can break down.

Should you ever require service, you can either contact your dealer or national distributor, who can solve any problems locally.

You are also very welcome to contact GamuT International A/S directly if you need any information or help.

Our contact information is listed on the last page of this user guide.

The protection circuitry - a second of silence

The ideas for the protection circuit come from our professional amplifiers, where it has worked well since 1982.

The protection circuit can detect:

- DC errors
- high level subsonic signals
- long-term ultrasonic signals
- high temperature
- low impedance loads or short circuits

If needed, the protection will simply mute the input signal, and if necessary open the output relay. The relay will normally open only after muting the input signal to avoid relay switching of strong currents that could damage the relay contacts.

In case of e.g. a short circuit, the input is muted for a second. Then a 1 millisecond long pulse is sent out to test again. If the short circuit still is present, it waits a second and tries again, and so on. Less than a second after the user has removed the faulty cable, the system will remove the muting.

The protection also detects too low impedance loads, and alerts the user by muting for a second. This way, the user can be sure of hearing only clean non-distorted audio. The normal current limiting and momentary distortions of the music are completely avoided in the GamuT DI150 power amplifier.

You may experience a second of silence while the music is playing loudly. This is the protection acting to protect your audio system. Any amplifier will start to clip the top of the music if you exceed the maximum power level. Technically, clipping generates a lot of high-frequency energy, which can burn out the tweeters in your loudspeakers. The protection also constantly checks the energy above 20 kHz, which humans do not hear.

This means that the protection circuit can interfere even though you cannot hear any reason for this. If you experience these seconds of silence, simply turn the output level down until the music plays without interruption.

You can also provoke the subsonic protection by playing warped records without using a subsonic filter. Please check your tone-arm/cartridge resonance frequency, which should be about 8-12 Hz to reduce the effect of warped records.

Technical quality

Output power (@230V/115V):	180 Watt @ 8 ohms 360 Watt @ 4 ohms
Frequency range:	20 - 22,000Hz +/- 0.1dB
Speaker load:	<1.5 ohms
Noise level:	100dBA below 100W @ 8 ohms
THD:	<0.05%
Distortion:	Mainly 2 nd harmonic, decreases with higher out level
Line input impedance:	20 kohms unbalanced 40 kohms balanced
Line output impedance:	75 ohms unbalanced 150 ohms balanced
XLR pin information:	1.Ground 2.Positive 3.Negative
Mains:	115VAC / 230VAC
Idle power consumption:	100W
Maximum power consumption:	1000W
Dimensions:	155 x 431 x 410 mm (H x W x D)
Shipping weight:	30 Kg

We at Gamut hope you will enjoy the musicality a GamuT product brings into your home.

Should you have any questions or other matters that you would like to share with us, then please do not hesitate to get in touch with us. We will look very much forward to hearing from you.

Every musical note...

Congratulations! You have just invested in one of the finest Integrated amplifiers available!

Many years ago, we chose the word “Gamut” to be our company name. This single phrase in Latin means ‘a complete array’ or ‘an all-encompassing spectrum’. In our case, it refers to the entire range of musical notes.

The Gamut name therefore fits our philosophy perfectly: Our goal is not missing out on one single element among the myriads of tiny bits of information that create a realistic sound experience.

There are many more things to reproducing music than just reproducing the individual musical tones. But it is the complex spectrum of multiple individual tones created by the musicians’ instruments and voices, and not least the reflected signals thereof that create the sounds we detect with our ears and send to our brain to give us the wonderful sensations only music is capable of. These unique musical feelings are what we see as the Gamut mission to give to you!

As in every Gamut product, our amplifiers are designed with the capability of giving you the best possible musical experience, which is synonymous with reproducing all of the essential information in the recording to create the illusion of “being there”.

To ensure this, we use only the best “raw materials” trimmed and crafted to perfection by the best engineers and sound enthusiasts in the industry.

Following the guidance lines in this manual will assure you an exquisite sound experience, so be ready for “the entire range of musical notes”

We wish you years of proud ownership and happy listening. We feel confident that you will cherish this amplifier for both its amazingly clear reproduction as well as for its splendid craftsmanship and beautiful appearance.

Best wishes ☺

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